

by a tuft of feathers protruding from her breast. The season's efforts resulted in a net loss and demonstrated how difficult it is for this species to perpetuate its kind when confronted with the enemies mentioned.

As was the case with his former mate, the new one is constantly with him and he brooks no rivals for his favor. During the early winter the birds roost in a tall green privet hedge along the side of the yard. Last January, after the privet leaves had fallen, the pair resorted to the inside of my neighbor's double garage to roost, he kindly leaving a door open for them. Aside from looking rather bedraggled at molting time, there is but little in his appearance or manner to betray his unusual age.

NASHVILLE, TENN.

ARIZONA FIELDS ARE VIRGIN FOR BIRD BANDERS

BY FRED M. DILLE

From an ornithological viewpoint, there is probably no portion of the United States more intriguing than the "Southwest", and particularly Arizona. Especially to those that have punctuated their studies of birds with collections. I have been afflicted with an Arizona urge for years, and though I have been footloose for some time and could have gone, it was but last winter (1933-1934) that I got out of the old rut and made the break. A good sized blizzard in the Dakotas just prior to the date chosen for our departure, caused us to leave our car at home and start the journey by train. Therefore in due course of time, the early morning of the last day of the year 1933, found Mrs. Dille and myself rubbing the grime from the windows of the Pullman with our noses, in our efforts to obtain a first-view impression of Arizona.

As our train gradually dropped to lower levels and the sonoran regions, I saw my first sahuaro (Cactus) and mistook it for an abandoned fence post. But finally with too many fence posts to account for, I realized what they were. Recalling many oölogical yarns of collectors and climbing such hazards for eggs of the elf owl, I pointed out a good healthy specimen of sahuaro to the car porter and told him I would like to have a photograph of him climbing one of those cactuses. He took a good look at them and replied, "Boss, I do not believe I could do it." Later in the winter I had occasion to look up Mr. D. D. Stone, whom I found on a homestead near the historic town of Casa Grande. He is an old-time oölogical acquaintance of forty

years vintage from New York State. I discussed with him the practicability of climbing a sahuaro and he said it had been done by first burning off the spines with kerosene torches.

Now! I would not impose this article upon BULLETIN space, unless I thought there might be bird notes of value to some reader taking the status of a prospective visitor. And let me suggest to any northern reader, who has never been to Arizona of a winter season, to, by all means, arrange for such a visit. Winter in Arizona is by name only—by courtesy of the calendar, so to speak. I must emphasize the delights in the climate, the evenness of the days, the reliability of good weather, and the new and rare bird life that you will come in contact with.

If you choose Phoenix, as we did, you will make no mistake. Although it is a large city with an extensive suburban population you will have easy access to the desert. And by going from ten to forty miles out in some directions, you will find bird life of three zones. As a location for stopping, choose to the northwest or northeast of the city center, and your routings through the street traffic will be easier. But do not make the error we did in leaving your car back home.

For a bird student from Iowa, Minnesota, or eastward there will be made pleasing discoveries than for one from locations north of Arizona, on account of direct autumn migrations. I did not realize until out in the field, that, like ourselves, there would be birds from the north spending the winter here also. And therefore I did not tally up on so many that were new in my experience. But the few that were new were sufficient to make the winter long remembered. The Cactus Wrens, the Verdins, the Gila Woodpeckers, and the wealth of Thrashers! And of former summer bird friends, on this, their winter playground, such surprises in the brightness of their winter plumage and the young in all stages of seasonal changes! To see flocks of Mountain Bluebirds in one field, flirting with a flock of Western or Chestnut-backed cousins in the adjacent area is one thrill. You will find birds in winter migration from western Utah, eastern Oregon, mixed with birds from southern California and from the higher elevations of the Rockies of Colorado. All these are pleasures necessary for you to experience to round out your field knowledge of your northern summer birds.

It is regrettable to Arizona, that the foundational bird records have been published by outsiders on visits to the State, notably by ornithologists from California. As a basis with which to work, one

has to have a copy of Swarth's Distributional List of the Birds of Arizona.* To continue on such a substantial basis, there is an immense field for research work open to anyone who will make residence in Arizona and keep systematic records.

The migration detail alone, is tremendous and mystifying in trend. This study is complicated by first the northern birds that come to the lower sonoran zones of Arizona for their winter sojourn and the large group that do not leave Arizona the year around, but can move from the lower levels to high elevations within the State's borders. Also confusing are the winter visitors from the north, that act like the human tourist, here today in numbers and forty miles away tomorrow. Bird banding holds high possibilities and any systematic study of the routes in migration within the State will require much pioneer bird banding.

Now, as I have intimated, my traditional information about the birds peculiar to Arizona has been founded upon printed narrative and records, and I have had fixed ideas about their habits and habitats. But there has been a tremendous change in the character of the region about Phoenix, and much of my bird knowledge had to be readjusted. I refer to the development following the completion of the Hugh Government Irrigation System. The region about Phoenix for twenty miles in all directions is now under intensive cultivation with resultant citrus groves over twenty years in age.

The city of Phoenix itself harbors many birds. The residential section is extensive. Homes are on ample lot plan and shrubbery is semi-tropical and varied. Cactus Wrens, Abert's Towhees, Inca Doves, Palmer's Thrashers, and Gila Woodpeckers are as common throughout the city as out in the country. And hummers are legion. I had not encountered the House Finch since leaving Denver, and that was a pleasing contact. It brought to memory our old club meeting in Denver, and the much discussed topic of why and how the House Finch, without being a quarrelsome bird, could stay and thrive in close contact with English Sparrows. There is also an ample English Sparrow population in Phoenix.

One of the tragic angles to Arizona ornithology is the large amount of specimen material that has been taken out of the State, with no records or data resulting to the benefit of the State. The details of some of this collecting are deplorable and there will be a reaction to the detriment of coming students. Public sentiment has

*A Distributional List of the Birds of Arizona. By Harry S. Swarth. Pacific Coast Avifauna No. 10, Published by the Cooper Ornithological Club.

already reacted against depredations of the desert plant life, and a movement is under way to prohibit export of archaeological treasures. Bird life will be next in order.

The following notes I offer to emphasize my experience, and to take occasion to mention lines for Arizona research as I could see them; and also to add to the data available in the Swarth distributional list referred to.

INCA DOVE. *Scardafella inca inca*. I was in the field by January 18, 1934, and these doves were east of Phoenix in large flocks. About the border areas between the orange groves and the unclaimed desert. They had either just arrived from somewhere, or were flocking to be on their way elsewhere. This flocking broke up in a few days and they took on an even distribution throughout the city and the suburban citrus acreage for a continued stay and the nesting season. There are no citrus groves west of town and there were practically no Inca Doves in that direction. Of the allied species of doves about Phoenix, in season, the Mexican Ground Dove did not put in an appearance until the first of April and then in scarce numbers. The first record obtained for a White-winged Dove was of March 21, but I was informed that that date was early.

GILA WOODPECKER. *Centurus uropygialis uropygialis*. A truly typical woodpecker for the Phoenix region and a species that claims your admiration. They do considerable daily routine ranging, are very busy, mind their own business, and are as common as any flicker or woodpecker that you are familiar with. Home owners complain of a bird that with its long bill, punctures the grape fruit and orange. Some claim it is the work of this bird. Others blame the Cactus Wren or the Thrasher. My idea on the matter was that the Cactus Wren was the guilty party. But I would wish more research on this before being sure. I do not know sufficient chemistry to diagnose fruit juice in a bird's stomach. The damage is slight, however. A few grape fruit in an orchard is no loss. But you know how a farmer will react.

BLACK PHOEBE. *Sayornis nigricans nigricans*. With the coming of the canals and the water, this bird is common but stays close to the water. It is found nesting and uses every suitable site such as flumes, bridges, head-gates.

NORTHERN CACTUS WREN. *Heleodytes brunneicapillus conesi*. With my first specimen of Cactus Wren in hand, I was puzzled. I thought it was a Thrush. Dr. Coues, in his Key to North American

Birds, emphasizes this thrush similarity. The field notes which came from Dr. Coues always convey that original field touch which helps.

But this bird has deserted the desert and cholla cactus nesting sites for the proximity of the house and the citrus groves. One nest I saw was built in a mass of climbing vine on the trellis of a front porch (house occupied). And another in an empty tool box on a work bench in an open garage. The habit of building several extra dummy nests has not been given up. This bird is not quarrelsome, but sly and persistent in any plan. The bird is more welcome by the natives than the mockingbird.

BENDIRE'S THRASHER. *Toxostoma bendirei*.

PALMER'S THRASHER. *Toxostoma curvirostre palmeri*. The latter, *palmeri*, is an abundant nesting resident about the homes and orchard acreage. Every suburban home has a pair or more. The bird is commonly referred to as the "Bendire Thrasher", the name having been spread as popular information by some bird student. It resulted from my investigation that it was *palmeri*, so frequent about the orchards but one has to go out to more typical desert to find *bendirei*. I think the general distribution in this region is approximately three *bendirei* to four *palmeri*. There is a close similarity in the two birds. Dr. Coues in the "Key" comments on this very neatly. He states that if one has but a specimen or two it is hard to differentiate. But if one has a half dozen of each, they can readily be sorted into the two groups. I did not want to accumulate anything like a series of these two thrashers because I did not feel justified. But one day, I had the good fortune to obtain two thrashers that looked very much alike in plumage, and yet there was a striking contrast in weight and size, chiefly weight. Both were old birds and the location was desert. I used these two birds as my types for later sortings. The thrashers are nicknamed "pretty quick", which is the way the usual call note sounds to the native. Oölogy is good evidence sometimes to substantiate classification in ornithology. These two birds closely resemble each other in casual comparisons, but the eggs respectively are very different.

CEDAR WAXWING. *Bombycilla cedrorum*. As for my observation it remains as Swarth states, "Of rare and irregular occurrence." There were four birds that stayed with Mr. Yetter in his orange grove eight miles northeast of Phoenix, from January to April. The attraction appeared to be a large mulberry tree in full fruit. And I saw my first intoxicated bird from too much mulberry juice. I only took one of them for a specimen and for a record. I showed the bird to two per-

sons in the Valley who know birds and they stated they had never seen the waxwing before.

WHITE-RUMPED SHRIKE. *Lanius ludovicianus excubitorides*. My designation as above, will do for the present and until the revision of the group, now in progress, has been accepted. I dislike to bring any misfortune down on this shrike by divulging inside information to the plumage splitters, but there were hundreds along all the farming lanes west of Phoenix. They had not moved out by the middle of April. What was holding them was the great flocks of White-crowned Sparrows along the roadside thickets which they could not resist harassing. I suspect that this shrike wave came from the west and southern California.

ORANGE-CROWNED WARBLER. *Vermivora celata celata*. I have a few specimens that I obtained fourteen miles west of Phoenix in a wet back water growth of willows adjacent to Salt River. There were considerable numbers of them in the brush and they were there from March 1 until April 15, of my recording.

AUDUBON'S WARBLER. *Dendroica auduboni auduboni*. When Mr. Swarth states this warbler as abundant in winter in the lower sonoran valleys of southwestern Arizona, he gives their status exactly. The orange groves and suburban tracts about Phoenix are their favorite refuge, but also west of town fourteen miles and east for forty miles. Recall in connection with these notes, that as you go east from Phoenix, you gain elevation; but you get more in line with what I have figured out to be the chief migration route from the south of that region. They are not a flock bird and did not begin to bunch until approximately April 10. I take it that the bunching of the winter birds in Arizona closely precedes the beginning of the movement for the north. But in the north, the bunching in August or September is but a prelude to an erratic regional movement, instead of the beginning of the journey south. I am referring to most all smaller birds, not Audubon's Warblers alone. This would be an interesting question to solve in Arizona.

The only difference between this warbler and *coronata* is the yellow throat patch of *auduboni*. These warblers are more difficult to approach than sparrows, and I was bothered by making errors in shooting. What few specimens I did take were in various stages of plumage and my material indicates that the throat patch is the last one to come. I do not believe that the inclusion of *Dendroica coronata* in the Arizona list is justified excepting by actual specimens with a May or June label at the earliest.

ARIZONA CARDINAL. *Richmondia cardinalis superba*. You will be shocked to learn that this handsome bird should work out in an offensive manner. My first specimen had so foul an odor I had to investigate the food contents, and it was horse manure. This will explain the presence of pairs about whatever cow yard or stable (or worse) the various farm sites offer. They go in pairs, often more than one pair in company. They are shy and a little difficult to approach, at least in the winter season. This shyness of some birds seems to vary with the season. Up in the foothills, sixty miles east of Phoenix I found two pairs sticking close about the garbage heap of a C. C. C. camp.

ABERT'S TOWHEE. *Pipilo aberti*. The comment by Mrs. Bailey in her handbook, "Birds of Western United States", is typical of the cases of needed readjustment from that traditional knowledge I have been telling you about. This bird, like the Cactus Wren and Palmer's Thrasher, has abandoned the desert spaces for adjacent farming regions, citrus grove homes, and the city of Phoenix. It is not "extremely shy" but one might say it is "coy". In the city if there was an empty house, they were coming and going under the sheds of porches. And about the farms their runways were close to the stables or out-buildings that had space under the floors. "Runways" is a term used in speaking of small mammals but if the quail have runways, so does the towhee and *aberti* more so than any towhee I have ever made contact with.

LARK BUNTING. *Calamospiza melanocorys*. No bird has yet fooled me so completely as did the winter flocks of this old friend of my Colorado and Nebraska experience. If there is one bird on its northern nesting ground that I have known longer than any other it is the Lark Bunting. But what were these birds in this nervous, closely packed, quickly startled moving flock, acting just like a flock of wild scaled quail? There were no males of full colors in the bunch, which did not help my recognition. But my experience was exactly in corroboration of the comments by Mrs. Bailey in her Handbook. How they must tame down during their tedious journey northward, for when they arrive with us in Colorado and take location, they are very sociable, and full of song. There was a slight increase of black in the plumage with the first of April. They had not left the Phoenix region by the tenth of April, but the black colors were coming fast, on the males. We get first arrivals in northern Colorado usually by May 10.

CLAY-COLORED SPARROW. *Spizella pallida*. In the general vicinity of a locality in the dry bed of the Agua Fria River fourteen miles west of Phoenix, I took three of these sparrows at three different dates in February. The birds were in company, singly with dominating numbers of the White-crowned Sparrow. If one would work over these bunches of "white-crowns" with a glass and a gun, the sparrow tally for Arizona could be increased materially.

BREWER'S SPARROW. *Spizella breweri breweri*. During February-March there were but a few single birds mixed with flocks of "white-crowns". But by April 11 large numbers appeared in migration wave from the south, and this movement kept up for a week. This route was definitely from the south, down the valley of the San Pedro River, around the large Superstition Mountain, west side, and into a valley at the junction of the Verde and Salt Rivers. What brief study I could give Arizona migration routes was applied as above outlined, as I had it selected for close observation. My first specimens of this sparrow in Meade County, South Dakota, have been May 12. The large canal full of water with the heavy desert thicket on the bank was too good a refuge for a few days stay to be overlooked, and the sparrows hung up here in large numbers before gradually working up the Verde River Valley.

WHITE-CROWNED SPARROW. *Zonotrichia leucophrys*. There were without attempting to exaggerate over 100,000 of these sparrows scattered in the Phoenix region. From points twenty miles west, all through the valley of the Salt River, in every gulch and thicket, on every farm and suburban tract where there were thickets, in all the lanes, every gulch and thicket of the higher areas for sixty miles east up to 4,000 feet elevation, these birds were bunched. There were not so many with very conspicuous head markings developed so that I could determine them until April and I was shooting these birds in error. My field discernment on small birds is not as sharp as with some bird friends I know and I finally had to send back home for the bird glasses so that I would not be making kills I did not want. It was not until about April 11 that the flocks about Phoenix cleared out and I was sure glad of higher elevations east of town until April 22. I can thank them, however, for being host to other interesting sparrows that I plucked from their midst. If I had not wished to conserve my limitations more for daily specimens of other material I would have taken more of these sparrows, for I believe that April material would indicate that *leucophrys* and *gambeli* are about equal in numbers upon the Arizona winter range.

PHOENIX, ARIZONA.